

September 13, 2018

# High Desert Multipurpose Corridor Level 2 Traffic and Revenue Study

Task Order PS22786-3049

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PROJECT STATUS UPDATE

Los Angeles County Metropolitan Transportation Authority



# Expert Advisors in Toll Revenue/Financial Feasibility Assessments for Transportation Facilities

**CDM  
Smith**

OVER **71** years  
Founded in **1947**  
employee-owned.



**85+** toll specialists firmwide.



**50+** years providing similar type of services.



**60%** of all toll financings since 2010.



**LARGEST PROVIDER** of T&R services in North America.

- Have supported over \$100 billion in toll road financing worldwide
- Provided public sector support for project evaluation of many P3 toll road projects in the United States
- Providing support to Toll Authorities, DOTs, Regional Transportation Authorities, and Counties
- Supporting regional toll/ExpressLanes projects including I-105, I-605, I-5, and S.R. 241 EDCs

# High Desert Corridor Project Background

Caltrans and Metro initiated the  
HDC Environmental Process  
(EIS/EIR)

Final Environmental Impact  
Statement/Report (Final EIS/EIR)  
released

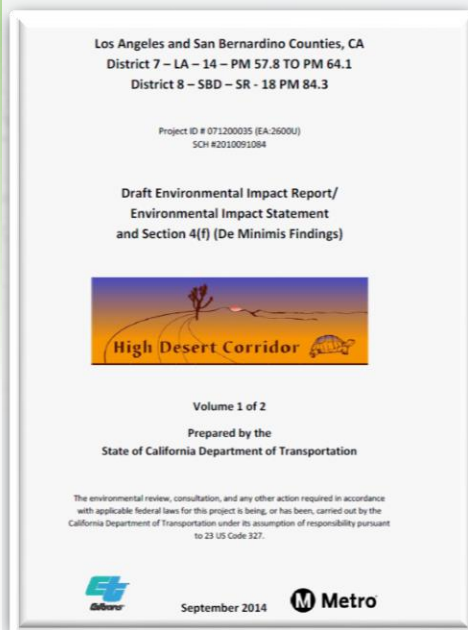
**2010**

**2016**

**2017**

Toll Feasibility Study (Sketch  
Level) completed by Parsons as  
part of DEIR

**Metro Initiates Level 2 Toll  
Feasibility Study to evaluate  
highway portion of project**

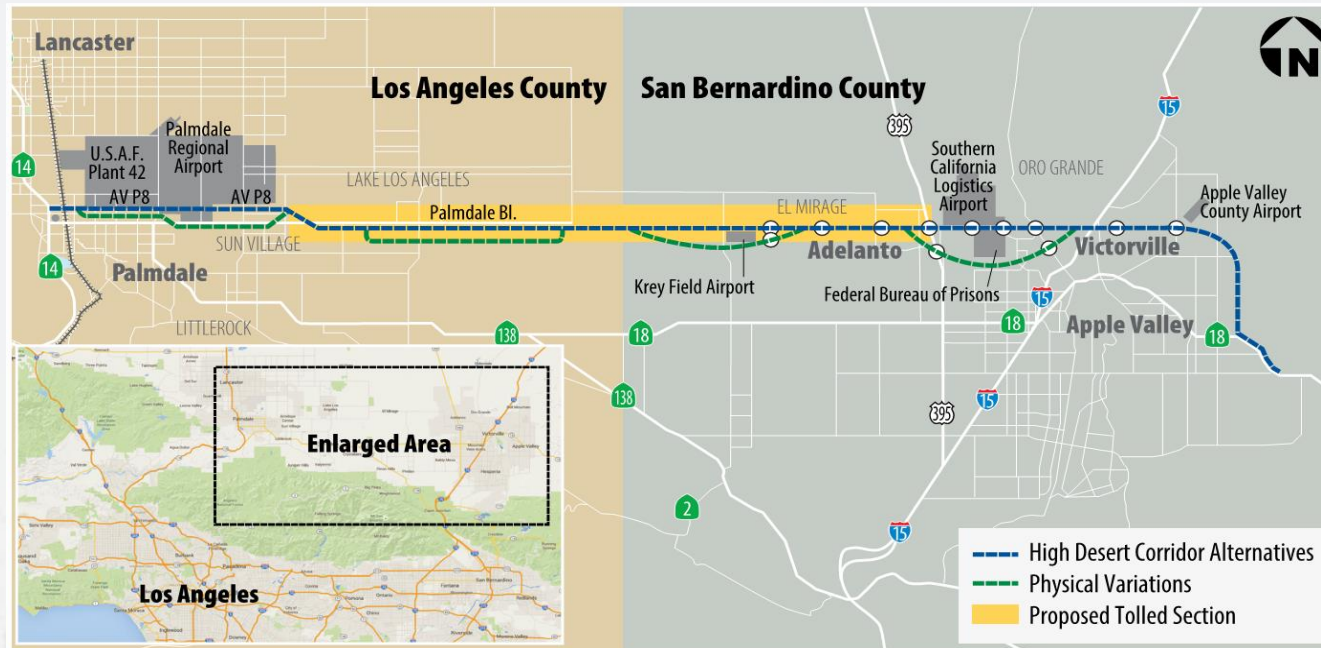


**Preferred Alternative** consisted of the following elements:

- Freeway/Tollway – toll section between 100th St. East in Palmdale and US 395
- High Speed Rail from Palmdale Transportation Ctr. to XpressWest station in Victorville
- Bikeway between US 395 in San Bernardino and 20th St. East in Palmdale
- Green energy production and/or transmission corridor

# Project Understanding/Study Objectives

**Objective: Develop Level II Traffic and Revenue forecasts for the High Desert Multipurpose Corridor . Prepare objective and independent traffic and revenue estimates.**

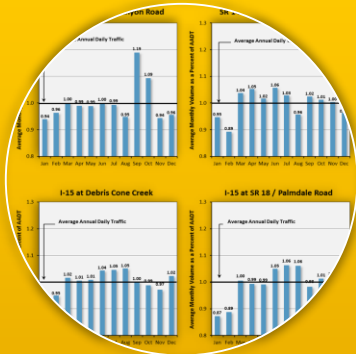


- Project extends from SR 14 in Los Angeles County to SR 18 in San Bernardino County
- Build out of four lane controlled access freeway with intermediate interchange/access
- All Electronic Toll between 100<sup>th</sup> Street East and US 395 (with sensitivity for full corridor)
- Daily Traffic ranges from 20,000 and 44,000 vehicles within project area
- Consideration of High Speed Rail (HSR) corridor service between Palmdale and Victorville

# Scope of a Level II Traffic and Revenue Study

- 1 Overall corridor travel demand**
- 2 Future growth characteristics**
- 3 Market capture and demand share**
- 4 Users willingness-to-pay**

# Major Project Study Tasks



## Existing Data Complication Summary

- Existing Studies
- Historical Data
- Seasonality



## Data Collection and Fieldwork

- Current Traffic
- Congestion Trends
- Peaking/Trucks
- O/D data
- Stated Preference



## Socioeconomic Analysis

- 2016 SCAG RTP
- Local Interviews
- Independent Source Comparison
- Economic Diversity
- Induced Growth



## Traffic Modeling

- Current Networks
- Major Generators
- Future Traffic
- Regional Demand



## Traffic and Revenue

- Toll Configuration
- Values of Time
- Toll Diversion
- Rate Sensitivities
- Regional Demand

# Existing Data Compilation Summary

## Relevant Studies

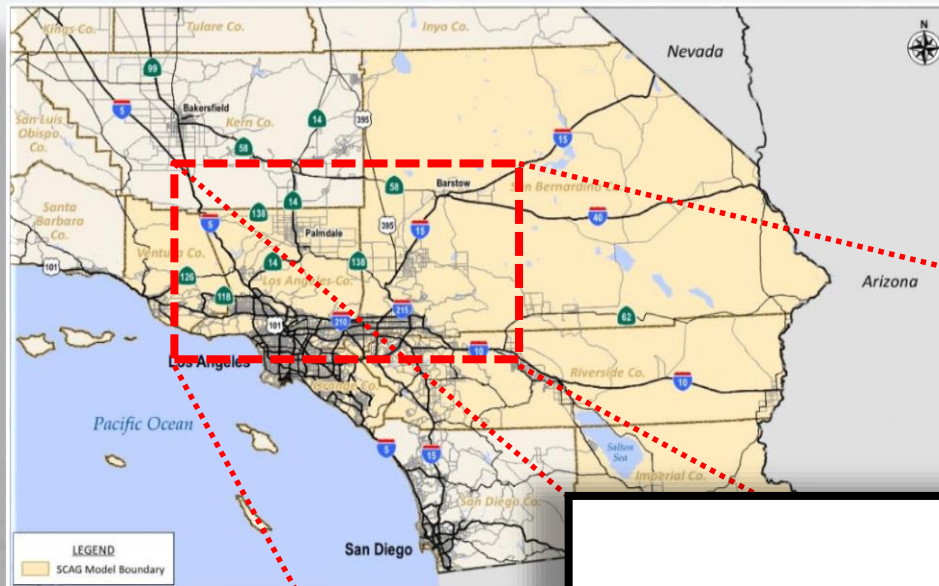
- **High Desert Multipurpose Corridor Studies**
  - Final EIR/EIS
  - Sketch Level Tolling Forecast Methodology
- **Other Relevant Studies**
  - North County Multimodal Integrated Transportation Study (NCMITS)
    - April 2016
  - Comprehensive Regional Goods Movement Plan and Implementation Strategy - April 2016
  - Northwest 138
  - Measure R Projects in Lancaster and Palmdale
  - Rail Ridership Report



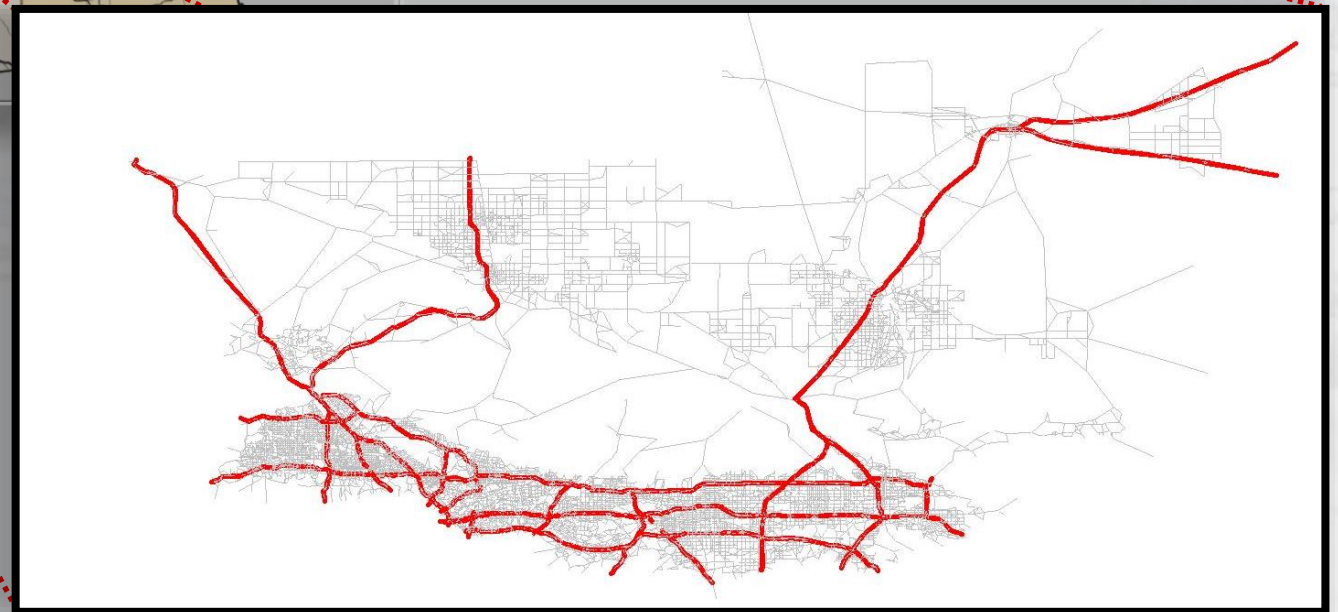


# SCAG RTP 2016 Model Boundary

## Windowed Approach

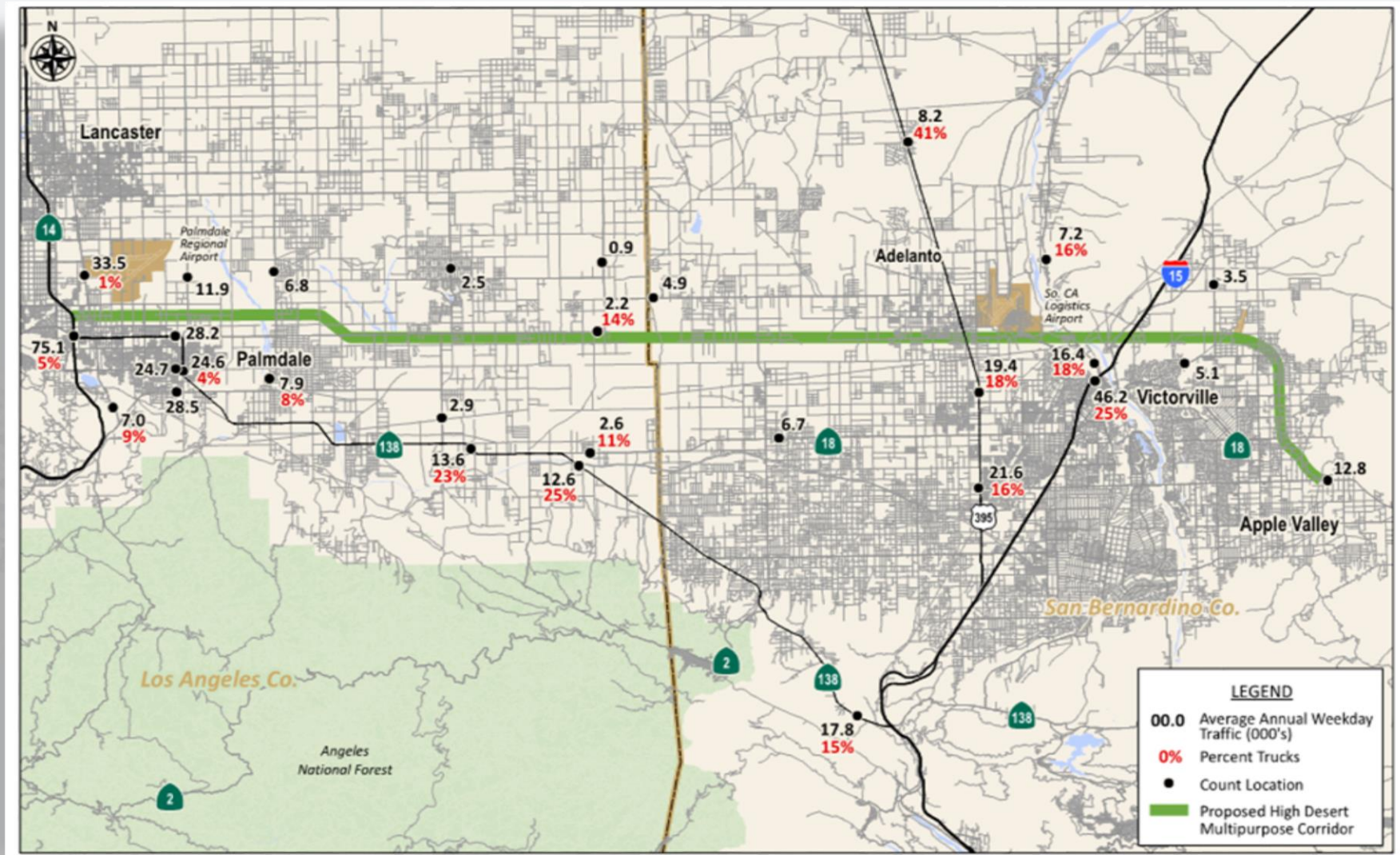


- Model Study boundaries include entire High Desert area and Parallel facilities such as I-210, I-10 and SR-60



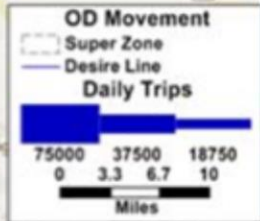
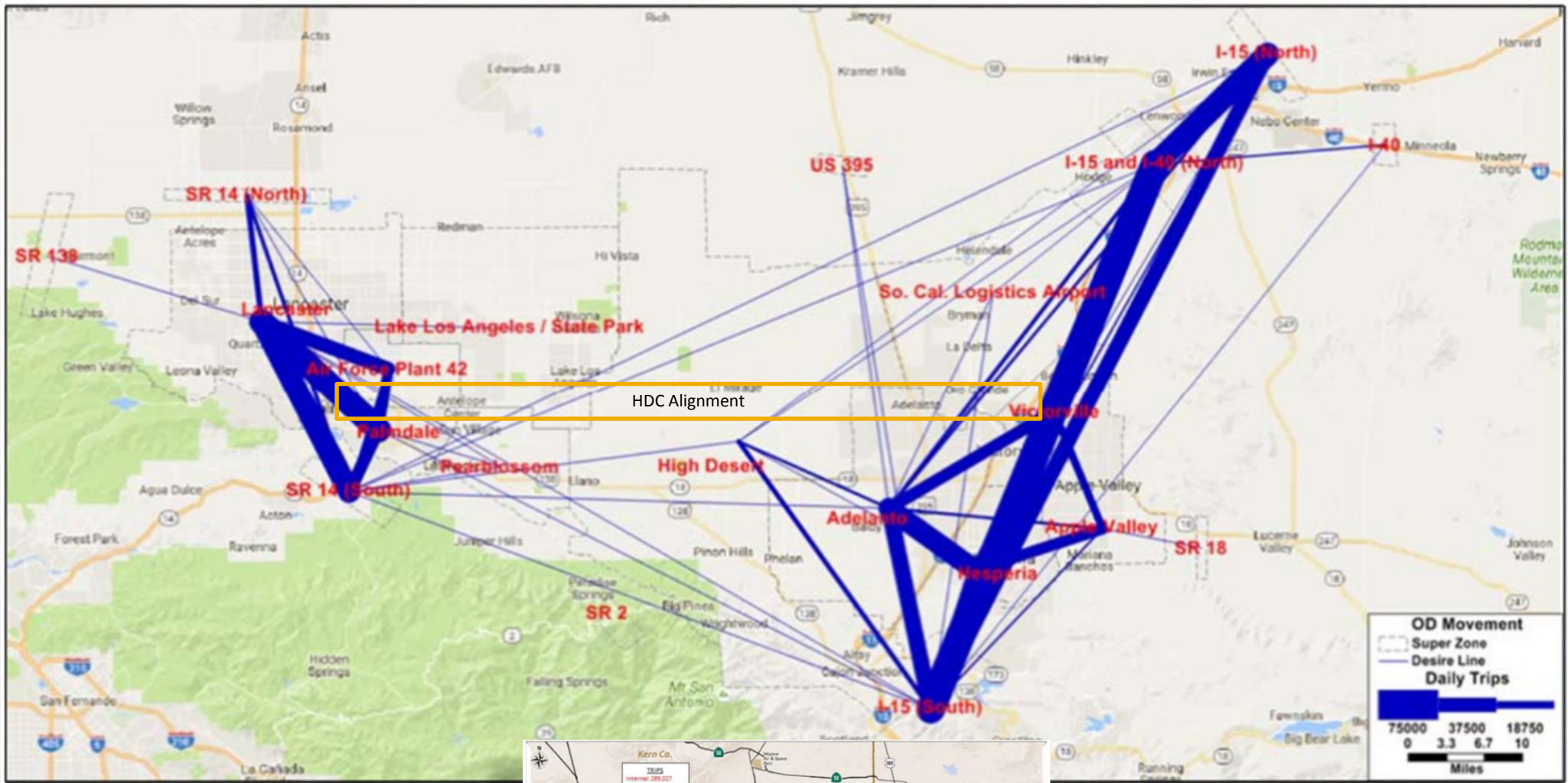
# Composition of Traffic

## Daily Traffic Volumes



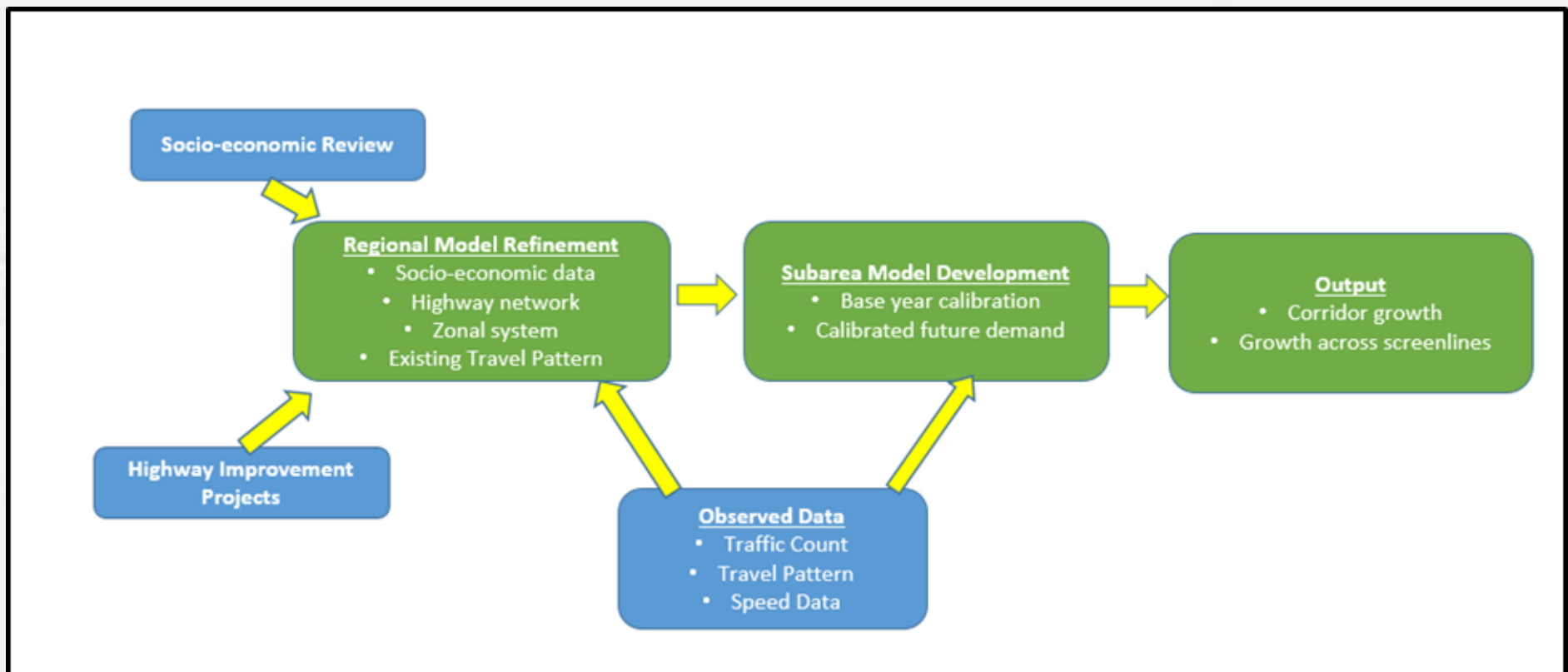


# Distribution of Traffic



# Basic Modeling Methodology

- Updated SCAG 2016 Model
  - Infuse updated traffic and congestion trends
  - Current Socio-economic trends and forecasts update
  - Network enhancements and updates



# Socioeconomic Assessment

## Stakeholder Interviews

### Purpose

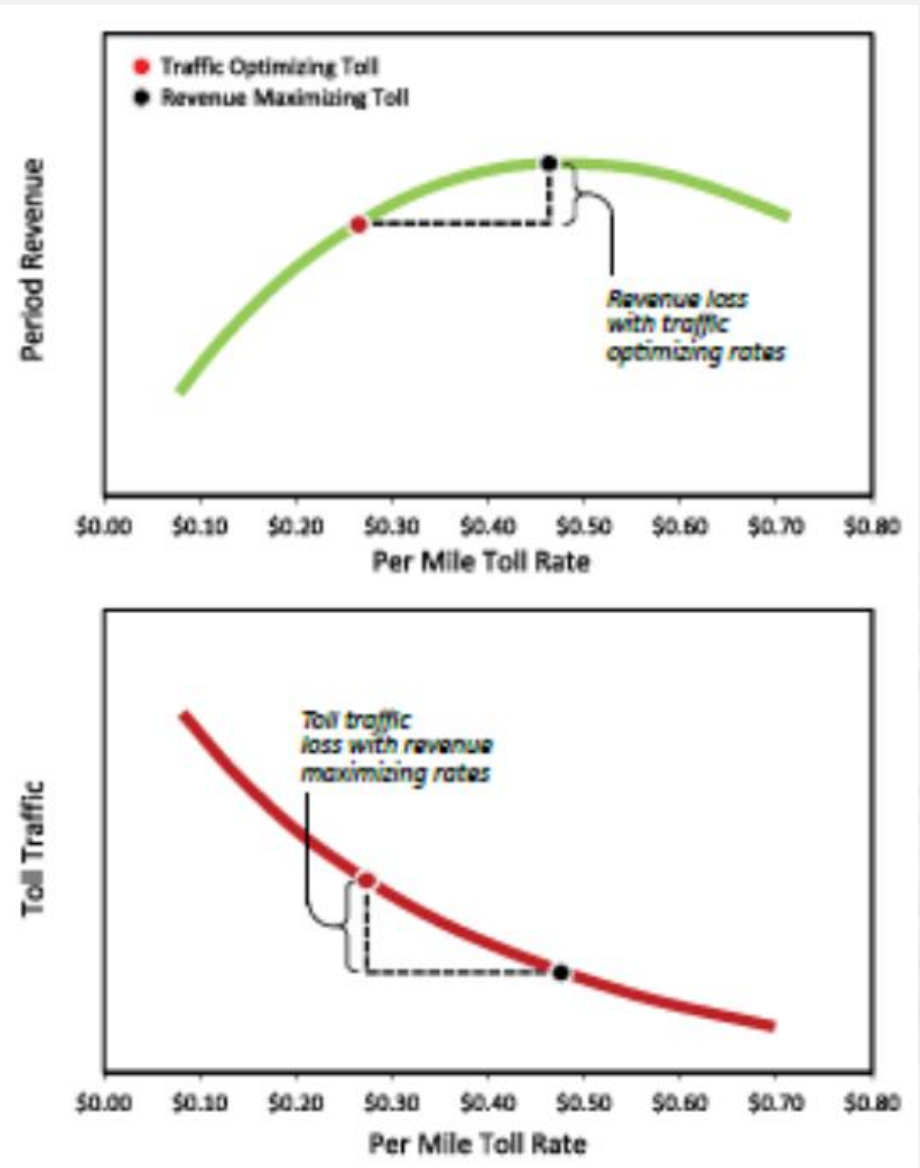
- Evaluate the reasonableness of the SCAG 2016 RTP projections
- Consider the land-use and growth effects of HDMC Project
- Include updated known and announced developments and projects



# Traffic and Revenue Modeling Methodology

## Key Considerations

- 2016-2040 SCAG RTP
- Windowed Model
- Calibration
  - Traffic/Speed/Delay
  - Origin-Destination Patterns
  - Traffic Operations
- Mode Choice Variations
- Toll Diversion
- Toll Rate Sensitivity



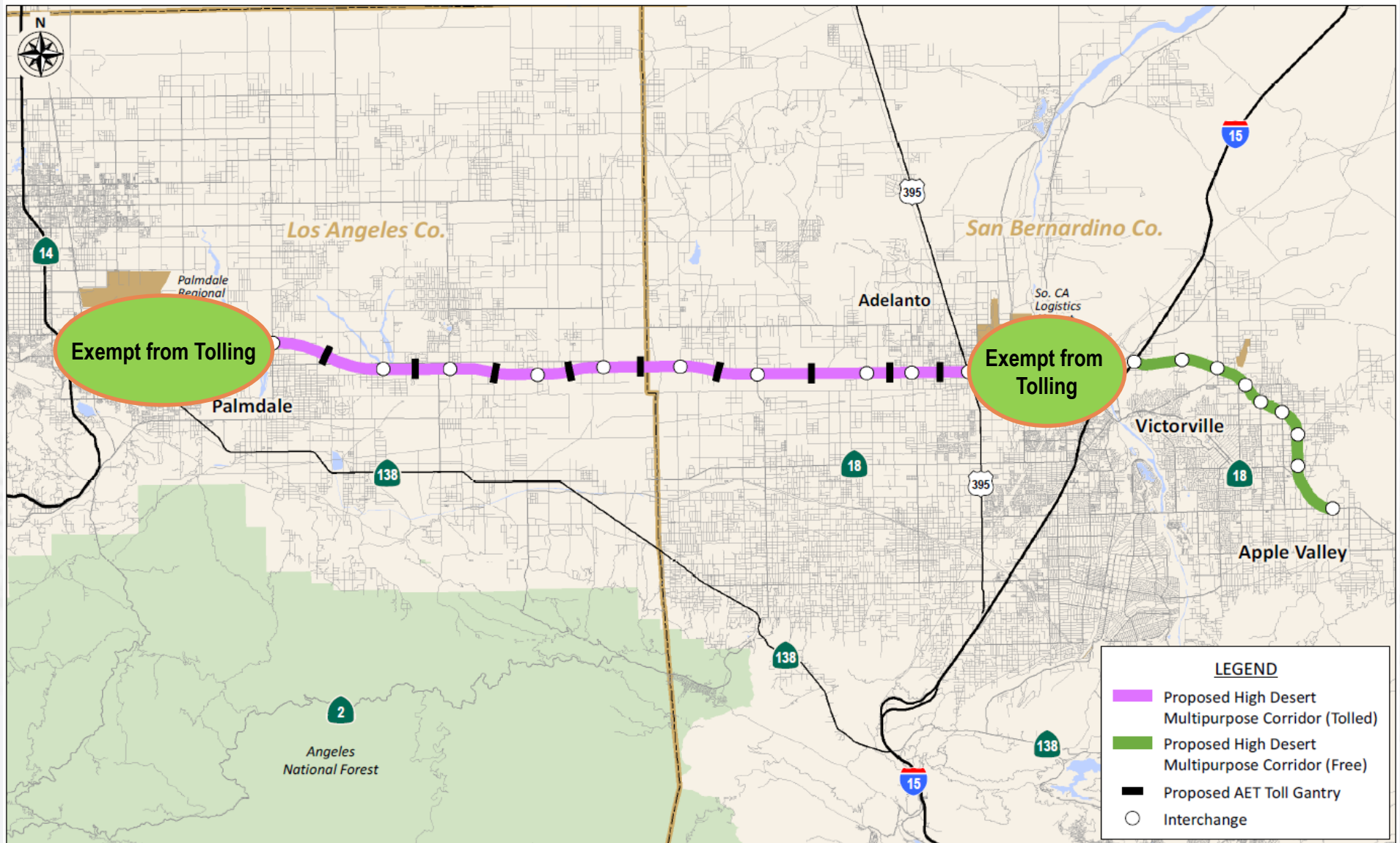
Note: The charts illustrated above are only for visual representation

# Project Tolling Concepts

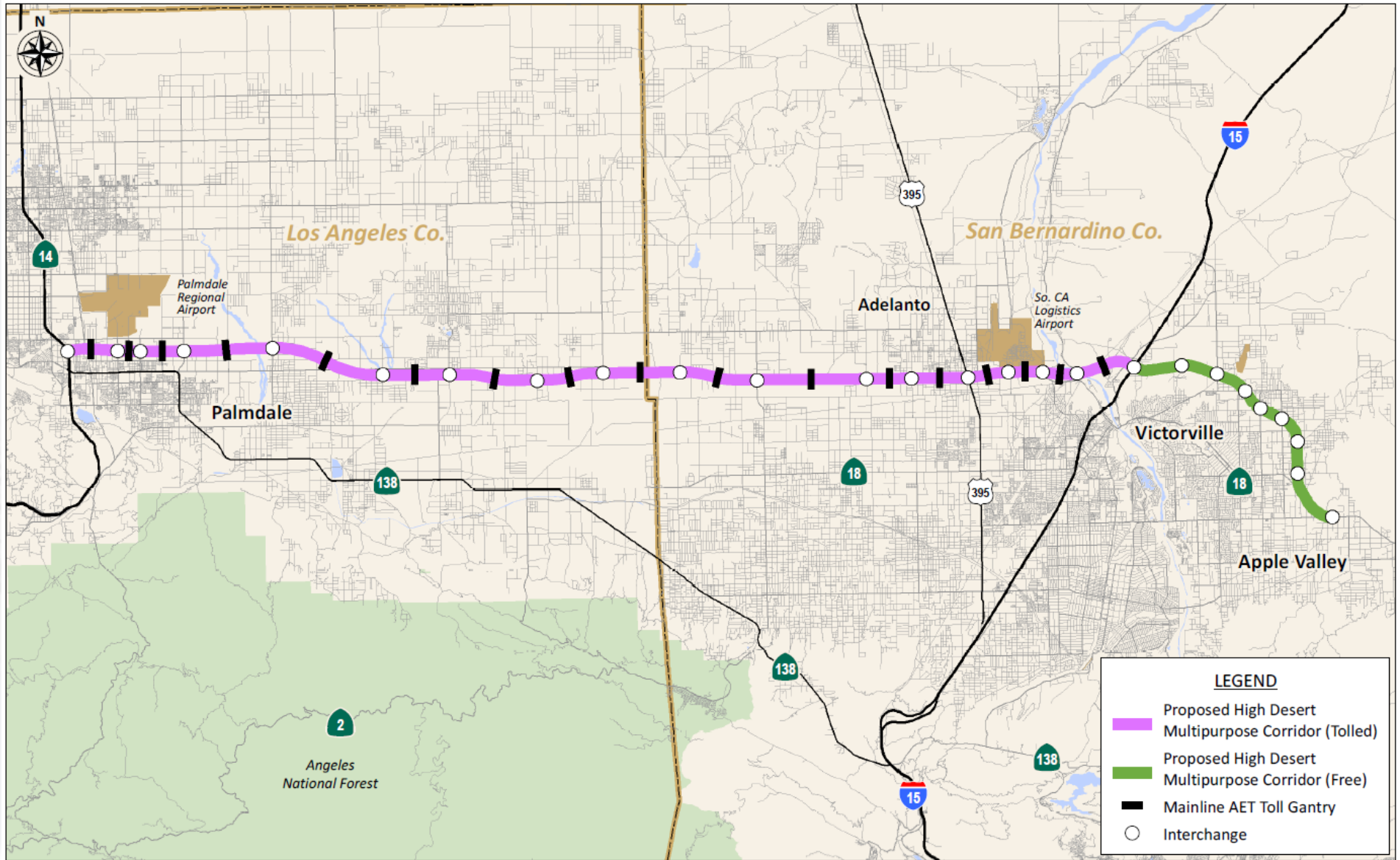
- **Base Case “Short Configuration”**
  - Proposed 32 mile east-west limited access HDMC toll segment
  - Limits 90<sup>th</sup> St. east in Palmdale to US 395
- **Long Configuration**
  - Proposed 49 mile SR-14 to I-15 east-west limited
- **Open Toll Scenario**
  - Proposed 49 mile SR-14 to I-15 east-west limited
  - Divided the corridor into four toll segments priced per mile



# Project Tolling Concepts – Short Configuration



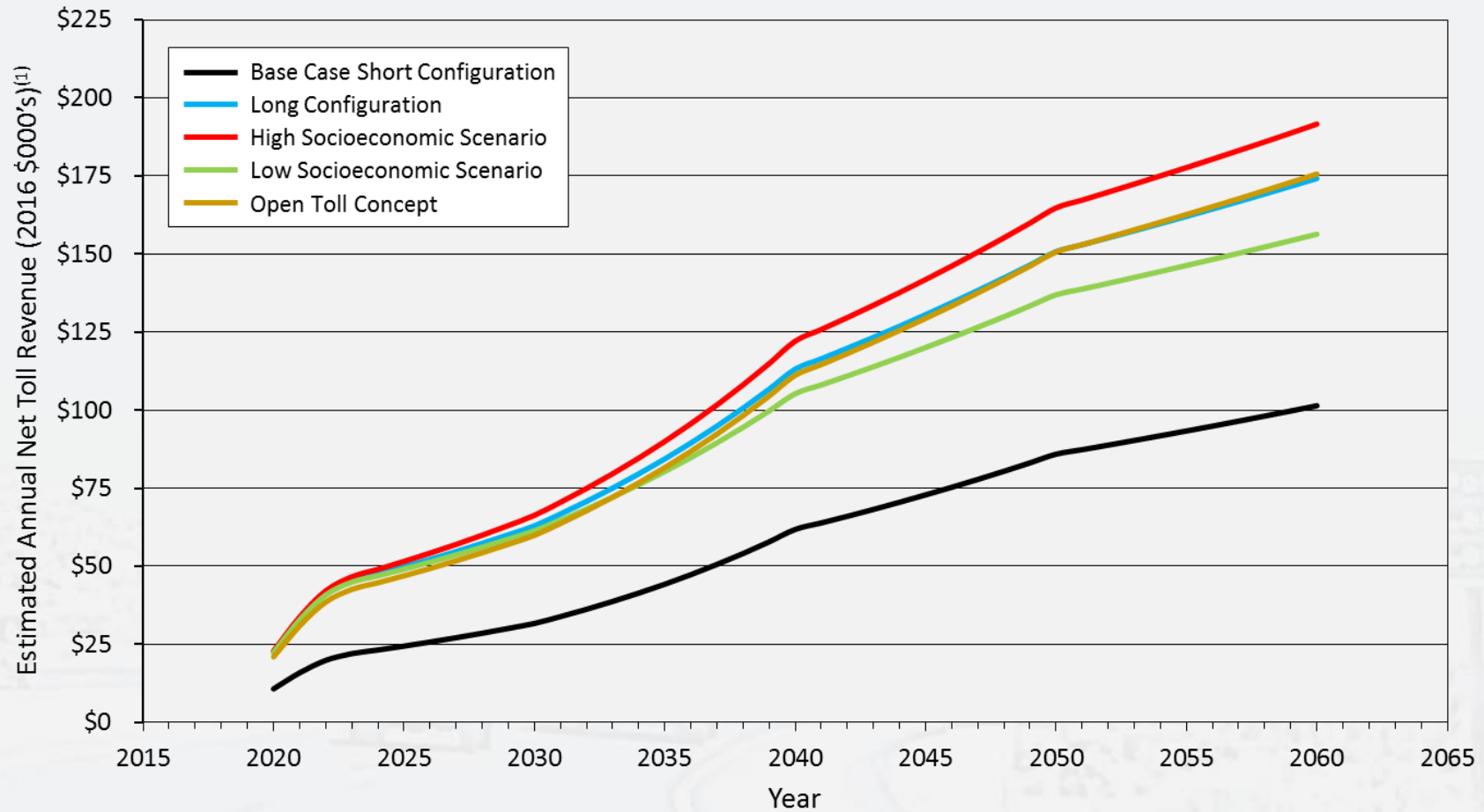
# Project Tolling Concepts – Long Configuration



# Project Tolling Concepts – Open Toll Scenario



# Estimated Annual Net Toll Revenue 2020 to 2060



<sup>(1)</sup> Includes revenue adjustments for uncollectible and unpaid transactions

Note: Assumed ramp-up factors were 0.6 in 2020, 0.8 in 2021, and 0.95 in 2022 with full ramp-up by 2023.

An additional revenue reduction of 5 percent was assumed in 2020 to account for additional opening year leakage.

Net toll revenue is in 2016 dollars.

# Estimated Annual Net Toll Revenue 2020 to 2060

- Base Case “Short Configuration”

<u>2020</u>	<u>2040</u>	<u>2060</u>
\$10.7m	\$61.8m	\$101.4m

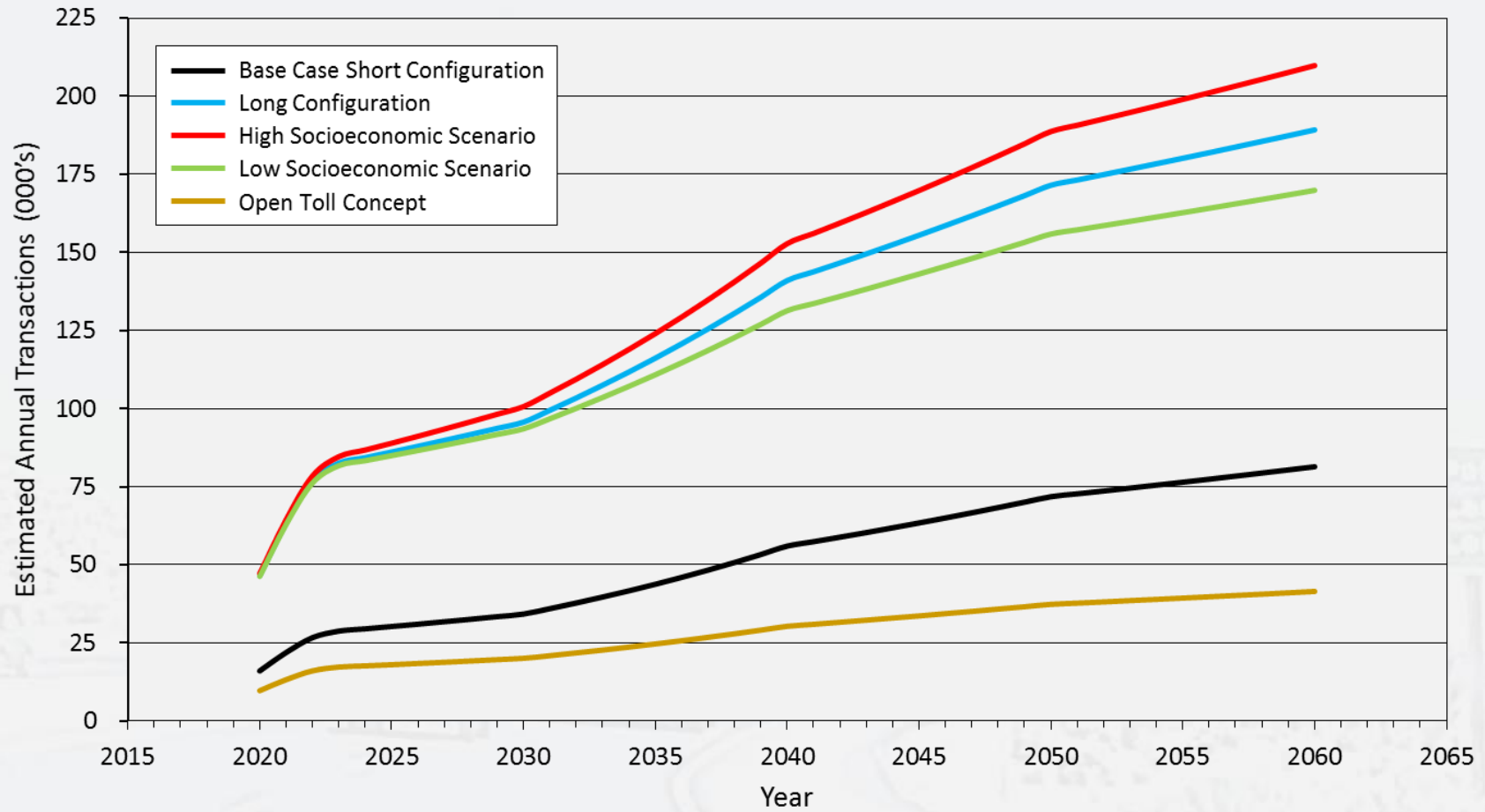
- Long Configuration

<u>2020</u>	<u>2040</u>	<u>2060</u>
\$22.5m	\$113.1 m	\$174.1m

- Open Toll Scenario

<u>2020</u>	<u>2040</u>	<u>2060</u>
\$20.9m	\$111.1 m	\$175.6m

# Estimated Annual Transactions 2020 to 2060



Note: Assumed ramp-up factors were 0.6 in 2020, 0.8 in 2021, and 0.95 in 2022 with full ramp-up by 2023.

# Estimated Annual Transactions 2020 to 2060

- Base Case “Short Configuration”

<u>2020</u>	<u>2040</u>	<u>2060</u>
\$16.1m	\$55.9m	\$81.4m

- Long Configuration

<u>2020</u>	<u>2040</u>	<u>2060</u>
\$46.5m	\$141.0m	\$189.2m

- Open Toll Scenario

<u>2020</u>	<u>2040</u>	<u>2060</u>
\$9.7m	\$30.3m	\$41.5m

# Feasibility Summary

## 2020 to 2060

	Present Value 2018\$ (in Millions)		
	Short	Long	Long Open
Net of Leakage only	\$1,014	\$1,876	\$1,835
Net of Leakage and Toll Transaction O&M only	\$653	\$1,037	\$1,651
Net of Leakage, Toll O&M and Routine O&M	\$379	\$763	\$1,376
Net of Bond Insurance & Debt Service (1.50)	<b>\$216</b>	<b>\$437</b>	<b>\$790</b>

*\*Assuming a 5.5% discount rate and general routine O&M estimates and feasibility parameters*

*Note CDM Smith is not, and has not been, a municipal advisor as defined in federal law (the Dodd Frank Bill) to La Metro and does not owe a fiduciary duty pursuant to Section 15B of the Exchange Act to La Metro with respect to the information and material contained herein. This bonding feasibility assessment is general and does not reflect a detailed financial analysis that would be need to be undertaken by a certified financial advisor.*



